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# Equity Research and Strategy

## Effective Electronic Trading in Low Volume Environments

It can be a trader's worst nightmare — buying or selling a stock when the volume just isn't there. It could be an order in a small- or mid-cap stock where liquidity is naturally low; or an order to buy or sell a large amount of stock around the lunchtime lull or when the market is just sloshing around in a range. Although the situations can be different, the nightmare is still the same — how do you participate with the market's volume instead of driving the stock with impact? Many traders can get frustrated in these situations and decide to flip the order to a broker-dealer who will trade it on their behalf. However, the broker may also move the stock adversely, so it may actually be better to work your order electronically to try and make the order disappear into the market. To do this, you have to dig deep into your electronic trading toolkit and artfully apply some combination of BLOOMBERG TRADEBOOK® Reserve, Pegging, Discretion and Trigger, Bang, etc., functionality.

Volume analysis is all about impact — what could I do to the stock with my order? There is nothing more depressing than to drive a stock higher and watch it fall back to earth when you are done buying in a low-volume environment. The BLOOMBERG PROFESSIONAL® service provides a few functions to help traders assess what can be considered average volume for a stock. From this information we can gain

an appreciation for the order size (as a percent of daily volume), trade size and how to apply the appropriate trading tools to help minimize trade impact.

When an order hits the blotter, many traders pull up the daily price chart to gain a sense of support, resistance and the primary price trend of the stock through a custom **G <Go>** template or the **GP <Go>**, **GPO <Go>** or **GPC <Go>** functions. The volume histogram can provide a sense of total trading volume. By adding a 5-, 10-, or 30-day moving average to volume, traders can assess if volume over the past few sessions is above or below trend. This information can provide a feel for whether the stock is consolidating or active.

Current volume conditions can be assessed through **GIT <Go>**. This function breaks down volume in time buckets. Current volume by time can be compared to the previous day's by changing the date. Traders can quickly see that they have to be careful with their execution strategy if the daily chart shows that volume over the past few sessions is below the 5-day average and GIT shows that the current day's activity is even lower than the previous day's. By looking at **GIT <Go>** from a few dates, traders can gauge if they have received an order at a time when volume tends to be low or if the stock is just naturally liquid. Using the moving average of volume as a

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### Structural Changes in the Listed Marketplace

May Conference Call

Date: Thursday, May 22, 2003 at 4:30 PM

Topic: Listed Market Evolution

- Changes at the NYSE with Liquidity Quote™ and Direct+™
- ITS and ADF: What would be the optimal market structure?
- Growing off-primary exchange liquidity

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"5/22/03 4:30 PM — Let's Talk: Bloomberg Tradebook Research and Strategy Conference Call" or call your sales representatives.

*Anonymity will be maintained on the call*

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## Effective Electronic Trading in Low Volume Environments (cont'd from page 1)

benchmark, GIT can also be used to determine how much volume may be left for the order to participate with.

Now, let's assume you are forced to try and execute in a relatively low-volume environment. Let's look at some strategies that may help you gain an edge.

### A. Time-Slicing an Order

A simple time-slice strategy is often a great answer in a low-volume environment. Our List Manager platform allows you to easily slice a small amount of the order into the market over the trading day. (See March 2003 *Equity Research and Strategy* for more details.)

### B. Pegging and Scaled Limit Orders

Many traders consult intraday charts to see if they can detect an intraday trend. In this case, if the stock is trending in the opposite direction of the order (buying in a downtrend or selling in an uptrend), then a simple passive pegging strategy may be a good way to go. But if the order is in a small- to mid-cap stock where the stock tends to trade in a stepwise re-pricing fashion rather than a smooth trend, then perhaps traders should consider using a series of scaled limit orders.

There are many techniques to determine at what price levels to set the limit order. Some traders use a combination of the quote recap (**QR <Go>**) and **GIT <Go>** to get a sense of the average execution size — the key here is to set the limit order size to trade

with the market rather than setting it too large where the market's natural trend is halted because your order is blocking its progression. Some traders scale their orders with limits set every 5 or 10 percent. Other traders use more sophisticated methods using classic technical chart pattern analysis. Here, intraday chart patterns (**GIPS <Go>**) such as flags, pennants, etc., are identified and "measured moves," based upon the patterns, are calculated. (See September 2001 *Equity Research and Strategy* for more detail on these charting techniques.) With the calculated price projection, traders can start to scale their limit orders to the price level that represents 70, 75 or even 80 percent of the calculated price projection.

If the market feels particularly weak, you may consider combining your scaled limit orders with a market pegged order. Assume that you are buying Research in Motion (**RIMM <Equity>**) and it's in an intraday downtrend. You decide to buy in a series of tranches — scaling your orders at 16.00, 15.75 and 15.50. To prevent your order at each scale price level from sitting on the bid and possibly stopping the natural downward trend of the market, you can add a market peg to the limit order, which will allow the order to continue to participate as the market floats lower.

### C. Oversized Preferred IOC Orders

An alternative to visibly participating in the market is to use stealth

trading and trade more opportunistically. While this requires more time to be devoted to the order, if successful, it often can be the most effective way to minimize impact.

A series of oversized preferenced IOC orders to market participants is a way of executing as much as possible at a particular price level without disturbing the quote, giving up information by being in the quote, or sweeping the market. The key here is to determine "who is likely to be the axe" in the stock. Certainly monitoring the Bloomberg Tradebook **BMQ <Go>** monitor and the quote recap can provide a sense of activity for ECNs. If the trader feels that an ECN has a large buyer or seller, he can choose to send an oversized order at a specific price directly to that ECN by placing the name of the ECN in the Bang box. This method enables the trader to execute against the display and any reserve that may be behind up to the total share amount sought. With this strategy all the market sees is the amount executed — the unfilled balance cancels harmlessly, without communicating the order's size.

Bloomberg Tradebook also supports Oversized Preferred IOC orders to market makers who are at the inside quote in Nasdaq's SuperMontage. In this strategy, traders will try to determine, using Bloomberg Professional service functionality, which market makers are likely to have an "axe" or reserve behind their displayed quote. **MKAC <Go>** provides a ranking of market-maker

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## Effective Electronic Trading in Low Volume Environments *(cont'd from page 2)*

market share in a stock — the higher the market share, the more likely the market maker has a deep reserve. But are they on the same side of the market as you? Looking at **ANR <Go>**, the analyst's recommendation may provide some insight. **ANR <Go>** shows the current rating on the stock by the market maker's analyst. Clicking on the analyst's name displays the other stocks followed and the current recommendation. Clicking through will display a history of the analyst's recommendations — was there a recent change or recommendation reiteration, which may position the market maker's axe? Finally, some traders take a look at indications of interest (**IOIA <Go>**) to see if the market maker is advertising his axe and **IIRA <Go>** to see if he is advertising that he has traded against his indication. Rather than going to the market maker directly, many traders may choose to keep their anonymity and electronically trade through a large oversized preferenced IOC order by placing the market maker's name in the ECN box on the Pop-up ticket.

Many of the techniques mentioned above work well when the price action is trending in a low-volume period. But what do you do when prices are in a tight range and volume is low — as is typically the case with small- and mid-cap stocks? In range-bound markets, Discretion and Trigger can help your executions remain stealthy.

Even in low-volume situations where there simply is little liquidity continually available, liquidity

typically comes in random spots. Sitting there watching and waiting to access the liquidity can be too time consuming and take too much time away from the other orders you are working. Adding a discretion component can provide the element of stealth while being flexible enough to participate in the random liquidity.

### D. Discretion

Discretion is a powerful tool that directs Bloomberg Tradebook's algorithm to aggressively respond to liquidity away (in a broader "discretionary" trading range) from your passively displayed limit price. Discretion works as follows: Suppose you are trying to buy 250,000 shares of a stock with a limit of 20.25. The stock has a bid/offer spread of 5 cents. Assuming you are on the inside, adding a 3-cent discretion component to the order directs the algorithm to take liquidity if it comes in between the natural spread and pay up to 20.28 for stock.

Many traders, however, feel that joining or showing a bid can communicate too much information. If this is a concern, the trader could set a limit of 19.80 with a discretionary range of 48 cents and achieve the same executionary desire (buy stock up to 20.28 if liquidity exists). Using Discretion in this manner can also result in your bid being displayed below the last level that is commonly displayed on most trading screens.

The limitation of Discretion is that it chooses participation based on price, regardless of size. Adding a quantity

Trigger to the order adds a volume condition to the order in addition to price.

### E. Trigger Trading

When a stock is in a range or you are trading in the direction of the trend, your order has an increased risk of adversely affecting the stock. In this case, it is very important that you participate with the liquidity that the market is displaying.

The Trigger tool can help your order to participate with volume rather than driving the stock by only sending orders when the market displays a minimum (Trigger) amount of natural liquidity. The Trigger amount will vary from stock to stock and by liquidity conditions. Combined with Discretion, the Trigger tool instructs the algorithm to fire out orders only when there exists in your defined discretionary range a certain amount of displayed liquidity. Display volume "triggers" the trade. Since there is typically Reserve, Trigger can have the effect of "raking" liquidity with little disturbance to the quote. The algorithm will re-fire if the trigger condition exists.

Trading in low-volume environments can be particularly challenging because the possibility of your order adversely impacting the stock is greater. Delegating the execution, while seemingly easier, rarely leads to a less impactful trade. Many times the order is better served by taking the responsibility yourself and artfully combining electronic trading tools to seek a better execution.

## International Focus

## New Centralized International Order Blotter – GTCB <Go>

Consolidate and customize all the trade information you need in one place

International traders face many challenges when trying to keep track of all their trade information from multiple global exchanges. Typically, a variety of order blotters are used to monitor different types of activity and information – working orders, fills, audit trails, market exposures, VWAP, net money, and much more. Given that this is the information they constantly monitor, many traders want to execute, modify or cancel orders directly from these blotters. Over time, we have created a variety of different blotters (GTBL, GTBF, GTTV, GTTR, GTFV, GTCC and GTCF) to address various trader needs. One shortcoming of this has been that some traders now run and monitor several separate blotters to get all the information they need.

To solve this problem, we are now introducing ONE centralized customizable international blotter that will have access to all the information contained in the other blotters. The new blotter will eventually replace all the old blotters. With the new blotter will also come the capability for firms to set up an administrator who will have the ability to trade orders on behalf of other users in the firm. To be enabled for the new blotter functionality, please contact your Bloomberg Tradebook sales representative. Once enabled, you can simply type **GTCB <Go>** to access the new capability.

### Customizing Your Blotter Views

Users will have three view choices. Clicking on the View button will activate a dropdown menu that will allow the user to choose a display of ORDERS, VWAP or TRADES. All three views will display common default fields but can be customized. Additionally, the ORDERS view (Figure 1) will display the Limit Price of each order. The VWAP view will display the Number of Trade Executions under VWAP, and the TRADES view will display the individual Trade Price and the Time of Trade Execution.

A firm administrator (or head trader) that clicks on the View button will have access to view three additional blotters – Firm ORDERS, Firm VWAP and Firm TRADES. These “firm” views enable him to monitor the execution exposure for all traders on the desk.

### Actively Managing Your Orders

Orders that are entered into any of our international market monitor screens such as BMQ will automatically show up as working orders on a user's GTCB blotter.

Orders can be modified or cancelled in GTCB by holding the cursor over an order and clicking on the left mouse button. A Quick Cancel (Quick Cxl) button is also available to cancel all working orders, all buys, all sells or all trades on a specific exchange, or cross all exchanges if you are trading in multi-exchange mode.

### Customizing Your Blotter

The three display views are each customizable. Clicking on the Properties button on the GTCB screen will enable you to select the properties and sort options for that view. Each view can have up to ten columns, four of which can be specified as sortable.

### Additional Features

Filtering options have also been added to help traders track all of their trading information. In the ORDERS view, traders can filter by exchange, side, status and order type. Information can be filtered by exchange, side and status on the VWAP and TRADES views.

Additionally, multi-exchange trading is fully supported on GTCB. Using the “single/multi” toggle button and specifying a security in the “ticker” field in the toolbar, traders can view their orders, VWAP and trades either on a specific exchange or across all exchanges.

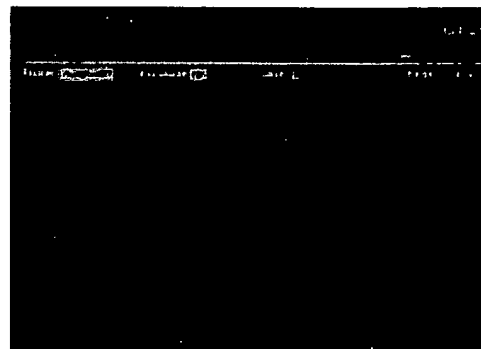


Figure 1.

## Morning Coffee – Get Your Day Off to the Right Start *(cont'd from page 6)*

for their default country. Further customization enables traders to include news for other countries or specific industry news such as conference schedules and seminar calendars that otherwise can be difficult to obtain.

Understanding correlations between markets, sectors and individual securities can help traders more effectively generate trade ideas, and determine the effects news and price action in various sectors may have on the traded stocks. Bloomberg enables traders to monitor relationships on both macro and micro levels. Using **CORR <Go>**, a trader can create a correlation matrix using indices or individual securities. They have the option to create either a custom matrix or use a symmetric matrix with the securities or indices they monitor. For a more detailed analysis of multi-security relationships, traders can use **HS <Go>** to examine the statistical relationship both numerically and graphically. Finally, using **COMP <Go>** and **HMS <Go>**, traders can graphically analyze historic relationships between indices

and securities, and avoid being blindsided by news that may affect their trading.

Equally important for traders is understanding which industry groups and individual stocks are moving the underlying indices they trade. Often, focusing on single stocks can cause a trader to miss important news and activity in other securities in the sector or index. At the same time, trying to track important information in the sectors and industries that matter can be a time-consuming task. A trader who is working orders in several names across several sectors would literally have to monitor hundreds of stocks to stay abreast of developments. Instead, using **GMOV <Go>** and **MOV <Go>**, a trader can easily monitor important activity in the sectors and securities in one place. **GMOV** will alert traders of active sectors within an index, while **MOV** will alert traders of active securities within an index. In either case, traders will be able to easily pinpoint the underlying activity.

- **SPX <Index> GMOV <Go>** for Group Movers within an index.
- **INDU <Index> MOV <Go>** for security movers within an index.

Volatility can also play an important role in the performance of the overall market or a specific sector. Traders, in turn, will monitor indices and options that allow them to gauge

specific levels of volatility in the marketplace. Figure 1 uses a custom chart (**G <Go>**) that compares the VIX Index, the INDU Index and NYSE composite. As shown, the VIX, which measures volatility, is negatively correlated to the Dow Index, a broad market measure of performance. Traders in turn can use this information to provide color on performance going forward based on underlying volatility numbers.

Bloomberg Launchpad enables traders to customize their monitors to include all news, charts and data they need for analysis. Since traders can create several unique desktop views, traders can set up a pre-trade view that is completely separate from their regular intraday or other views. Using Launchpad, a trader can combine many of the pre-trade functions including: ECO, WEI, multiple news filters, graphs and multi-security relationship analyses.

The hour and a half before the market opens can be a busy time for equity traders. Often, they have to combine their personal research with a morning meeting, a meeting with their PM to discuss upcoming trades, and catching up on last night's activity. The Bloomberg Professional service offers traders the news and data they need, and the tools to analyze the information all in one place. The ability to customize their screens or create different desktop views to monitor the information further differentiates Bloomberg as the ideal tool for an equity trader starting his day.

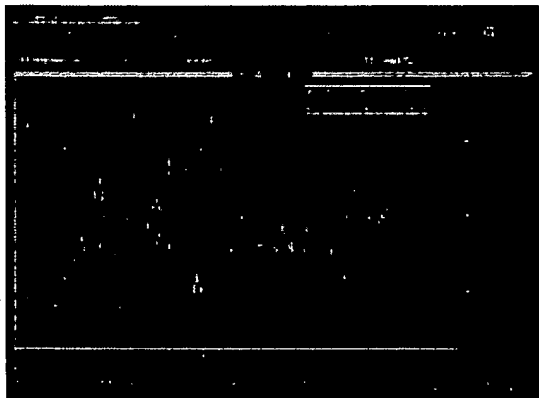


Figure 1.

## Trading Focus

## Morning Coffee – Get Your Day Off to the Right Start

Geopolitical events, economic releases, after-hours earnings announcements and sector news can all directly affect how a stock opens and trades throughout the day. Equity traders, in turn, must stay abreast of all relevant news and market activity, identify relationships between sectors and individual companies they trade, and analyze information that can impact performance. The challenge for most traders is getting through all the relevant information in the limited time before the market opens. The Bloomberg Professional service effectively places all the news, market activity and relevant economic information at traders' fingertips. By further allowing traders to customize screens to include the information most important to them, they can use the Bloomberg to more effectively set themselves up for the day, lead a morning call, or gather information on what other surprises may be possible.

Most important to all traders is being able to quickly review current news both on a macro level, as well as for the sectors and companies they monitor. BLOOMBERG NEWS® functionality enables traders to efficiently analyze news by category,

such as worldwide or economic; sector, such as networking or telecommunications; and individual company news. This type of flexibility makes it easy for traders to keep informed no matter how they operate. For example, many trading desks are now organized by sector rather than security. Traders need the ability to quickly filter the news into sectors.

- **NI TELECOM <Go>** for news on the Telecom Sector.
- **NI "Anything" <Go>** for news on a specific sector or category.

It should be noted that Bloomberg News search results display news stories with relevant research and analyst recommendations. The benefit to traders is twofold. First, they have one-stop shopping for all their news and research needs. Equally important, they can use the Bloomberg News filters for all their research, not only proprietary Bloomberg News.

The next step in setting up for the trading day is getting up to speed on market activity. Traders can get a snapshot of important market activity that occurred since the previous close using **MOST U2 <Go>** and **MOST U4 <Go>**. These searches provide traders with a list of active stocks in U.S. after-hours and before-hours trading, respectively. To obtain

a quick macro view of the latest global market activity, traders can use the World Equity Indices and World Bond Markets pages, **WEI <Go>** and **WB <Go>**, respectively. For traders, the ability to monitor worldwide market information in one place is critical, making WEI one of the most popular functions on Bloomberg. The bond information displayed on WB can be an excellent complement to WEI for the trader who monitors relationships between the two markets. WB provides real-time information on bond activity, as well as spread and curve information for the various maturities.

In addition to market activity, equity traders are more aware of economic news, recognizing the market impact that results from the releases. The ECO function can help traders plan a more effective execution strategy by monitoring the economic releases that directly affect the markets, sectors and individual companies they trade. And, since ECO is completely customizable, traders can minimize the information they monitor, focusing only on relevant releases. To access economic news, traders simply type **ECO <Go>** on the Bloomberg Professional. Initially, ECO provides traders with economic news

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